Table of Contents

United States
Department of
Agriculture

Food and
Consumer
Service

Office of
Analysis and
Evaluation

# The Extent of Trafficking in the Food Stamp Program

Table of Contents

# The Extent of Trafficking in the Food Stamp Program

Theodore F. Macaluso, Ph.D.
Office of Analysis and Evaluation
Food and Consumer Service
United States Department of Agriculture

August 1995

Table of Contents

Table of Contents

## Acknowledgements

The author wishes to express his appreciation to the many individuals who contributed to the report. Mike Fishman and Steven Carlson, senior managers at the Office of Analysis and Evaluation, provided guidance and commented thoughtfully on drafts of the text. Craig Beauchamp, Jordan Benderly, Bruce Clutter, Brian Haaser, Richard Lucas, Thomas Martin, Ken Offerman and other staff at the Food and Consumer Service and the Office of Inspector General helped to make this a comprehensive report.

Richard Mantovani, Ph.D. and other staff of Macro International successfully compiled and merged the data summarized here, made thoughtful suggestions, and responded promptly to the author's numerous requests for additional tabulations and analyses. Dr. Fritz J. Scheuren, Visiting Professor of Statistics, The George Washington University, provided valuable consultation on sampling methodology issues.

Table of Contents

# The Extent of Trafficking in the Food Stamp Program

United States Department of Agriculture
Food and Consumer Service

Office of Analysis and Evaluation
August 1995

## INTRODUCTION

Food stamps are intended for food. When individuals sell their coupons for cash at a discount it violates not just the spirit and intent of the program, but the law. Diversion of food stamps away from their purpose in this fashion reduces the intended nutritional benefits and undermines the public perception of the integrity and utility of the Food Stamp Program. A crucial question, therefore, is the extent to which trafficking exists.

In the past, there were no reliable data to estimate the nationwide amount of trafficking in the program. Some critics have cited guesstimates as high as $2 billion per year. Some have argued the true figure at closer to $100 million. None of these figures were based on solid information. Relevant empirical data simply did not exist.

New empirical data on trafficking have become available only in the last few years. A wealth of recently-collected investigative evidence on trafficking violations now exists. We have combined it with data collected as part of a new study of authorized retailers. The combination of these two databases now enables the Food and Consumer Service to make a preliminary estimate of the prevalence of trafficking and begin to identify where the trafficking problem is most serious. Our estimates are based on analysis of outcomes in over 11,000 completed undercover investigations conducted between March 1991 and March 1994. To anticipate our conclusions:

- *About $815 million was trafficked for cash from the government by stores during fiscal year 1993. This amounts to just under four cents of every dollar of food stamp benefits issued.*

- *Supermarkets, especially those owned by public corporations (i.e., a company whose stock trades publicly), have very low trafficking rates. Privately-owned non-supermarkets have substantially higher trafficking rates.*

- *Our analysis uncovered dramatic differences: the percent of redemptions that are trafficked ranges from zero to over fifteen percent across store categories when form of ownership, type of*

*store, and characteristics of the neighborhood where a store is located are considered.*

- *The stores which redeem the overwhelming majority of food stamps and a vast majority of neighborhoods in which authorized stores are located (and recipients shop) evidence very low trafficking rates.*

## APPROACH

All trafficking starts when program participants sell their coupons to someone for cash. The person who bought the coupons may, in turn, sell them to someone else and a chain of buying and re-selling can go on several times. No matter how many in-between buyers and sellers are involved, however, all trafficking must eventually flow through a food retailer authorized to participate in the Food Stamp Program. The reason is obvious, but worth pointing out explicitly: *authorized food retailers are the only ones who can redeem coupons for cash from the government.* Without access to an authorized store, the last person in the trafficking chain will lose money. Trafficking is more visible if several people are involved in the chain of buying and selling, but the dollars diverted from food assistance are the same regardless of the number of individuals involved.[1]

*Because authorized food retailers are the only ones who can turn food benefits into cash, knowing the prevalence of trafficking among retailers tells us the maximum amount of dollars diverted from food benefits by trafficking for cash.*[2]

The Food and Consumer Service (FCS) maintains a staff of investigators who work undercover to test whether authorized food stores sell ineligible items or engage in trafficking. Stores caught violating are fined or removed from the program and in some instances prosecuted. Two recent developments have made it possible to build on this investigative history to estimate the prevalence of trafficking for cash (which we label "direct trafficking") among authorized retailers. First, starting in fiscal year 1989, FCS made greater efforts to emphasize trafficking cases in its investigations and to work with a wide variety of sources, including local law enforcement agencies and citizen complaints, to develop leads for investigation and go after stores most suspected of trafficking. This change in focus of USDA's investigators means that we can now use the outcomes of these investigations to estimate the prevalence of trafficking.

The second development is a study of the characteristics of authorized food retailers which FCS started in October 1993. This effort links investigation data from the FCS Store Investigation and Monitoring System (SIMS) database to authorization and redemption data from the FCS Store Tracking and Redemption Subsystem (STARS) database and to Census data on neighborhood characteristics. The estimates in this report are based on the merged data file.[3]

Our approach was a three-step one. First, we sorted our database of over 11,000 investigations across five specific dimensions that categorize store types and store locations.[4] Second, for each specific category of store and location we compiled national data from calendar year 1993 on the total number of stores and the total food stamp redemptions in that category. We weighted the investigation data to accurately represent the national figures.[5] Third, we analyzed the investigation outcomes and calculated the weighted trafficking violation rates within each category. We calculated two rates: a redemption-based rate, to reflect dollar diversions, and a store-based rate, to identify the kinds of stores that contain the most violators. We multiplied the redemption violation rate against the total food stamp redemptions in each category and summed across all categories to obtain an estimate of dollars diverted from food benefits by trafficking in the Food Stamp Program.[6]

## FINDINGS

**About $815 million was diverted from food benefits by trafficking in 1993. This amounts to less than four cents of every benefit dollar issued** (Table 1). Our methodology yields a conservative estimate that is likely to best represent the maximum dollars diverted from food benefits by direct trafficking in 1993.

**Trafficking varies by type of store:**

- *Supermarkets redeem over three-fourths of all benefit dollars but very few of those dollars are trafficked.*
- *In comparison to supermarkets, trafficking rates among small stores and stores that do **not** stock a full line of food are 6 to 9 times higher.*

**Compared to publicly-owned food stores, the percentage of benefits diverted by trafficking is over 26 times higher among *privately*-owned food retailers. Food retailers owned by public corporations (i.e., owned by a company whose stock trades publicly) have very low trafficking rates** (Table 2). The public corporation category includes many of the major national supermarket chains, many convenience store chains, and many mini-marts associated with national gasoline retailers.[7] In 493 investigations of public corporations, FCS undercover investigators found trafficking involved about one percent of publicly-owned stores. The reason for these low rates is unknown, but we speculate that it reflects the fact that the business integrity of public firms is under continual scrutiny by stockholders, brokerage house analysts, and the Securities and Exchange Commission. Among privately-owned food retailers, FCS undercover investigators found trafficking in eleven percent of stores.

- *Among public corporations investigated because they were suspected of trafficking and/or other violations of redemption regulations, trafficking involved two-tenths of one percent of redemptions under investigation.*

**Table 1 - Trafficking is Low Among Supermarkets and Large Groceries But Substantially Higher Among Small Stores and Stores That Do Not Stock a Full Line of Food.**

| Type of Store | Percent of All | | Trafficking Rates | | Estimated Trafficking ($000) |
|---|---|---|---|---|---|
| | Stores | Redemptions | Stores | Redemptions | |
| Supermarkets | 15.3 | 76.5 | 4.2% | 1.7% | $282,058 |
| Large Groceries | 6.9 | 6.0 | 6.7% | 3.7% | 46,632 |
| **Subtotal** | **22.2** | **82.5** | **5.0%** | **1.9%** | **$328,690** |
| Small Groceries | 18.8 | 5.4 | 12.8% | 15.7% | 177,809 |
| Convenience | 27.7 | 3.8 | 8.1% | 9.6% | 78,090 |
| Specialty | 8.7 | 3.9 | 17.6% | 14.2% | 117,004 |
| Gas/Grocery | 10.3 | 1.2 | 8.7% | 10.4% | 27,528 |
| Other Types | 12.3 | 3.2 | 10.2% | 12.4% | 82,605 |
| **Subtotal** | **77.8** | **17.5** | **10.7%** | **13.0%** | **$483,036** |
| **All Stores** | **100.0** | **100.0** | **9.4%** | **3.8%** | **$811,726** |

Notes: *Trafficking violation rates are calculated separately for stores and redemptions.* The store violation rate is the percent of investigated stores caught trafficking weighted by the national distribution of stores. The redemption violation rate is the percent of trafficked redemptions in investigated stores, weighted by the national distribution of redemptions. The redemption rate takes the conservative approach of using each store's redemptions in the calendar year *ending* with the start of an investigation (to ensure that any awareness of being under investigation did not reduce amounts redeemed by trafficking stores.

The percentages for the distribution of all stores are based on a total of 200,568 authorized food retailers. The percentages for the distribution of all redemptions are based on a total of $21.1 billion. For calculating trafficking rates, the number of investigations in each store category are large enough to give high confidence in the estimates (ranging from a low of 530 to a high of 4,086 by store type).

**Table 2 - Publicly-Owned Food Retailers Display Very Low Trafficking Rates; Privately-Owned Retailers, Especially Non-Supermarkets, Are Substantially More Likely to Engage in Trafficking.**

| Type of Store | Trafficking Rates When Store is Publicly Owned | | Trafficking Rates When Store is Privately Owned | |
|---|---|---|---|---|
| | Stores | Redemptions | Stores | Redemptions |
| Supermarkets | 0.0% | 0.0% | 5.4% | 2.6% |
| Large Groceries | 0.0% | 0.0% | 6.8% | 3.8% |
| Other Types (small groceries, convenience stores, gas/grocery, specialty foods, etc.) | 1.7% | 1.8% | 12.0% | 15.1% |
| All Stores | 1.2% | 0.2% | 10.7% | 5.3% |

- *Among privately-owned food stores investigated because they were suspected of trafficking or other violations of redemption regulations, trafficking involved over five percent of redemptions under investigation.*

- *Among small privately-owned stores and privately-owned stores that do not stock a full-line of food more than 1 of every 7 benefit dollars redeemed was trafficked.*

**The store categories with the *lowest* rates of trafficking redeem the overwhelming majority of food stamp benefits** (Table 3). Stores vary widely in the amount of food stamps they redeem and the extent of the trafficking problem they represent:

- *Over twenty-eight percent of redemptions are accounted for by the category of stores least likely to traffic: large or small food retailers owned by public corporations.*

- *An additional fifty-six percent of redemptions are accounted for by privately-owned larger full-line food stores (i.e., supermarkets and large groceries).*

Table 3 - Stores With Low Trafficking Rates Redeem 84 Percent of All Benefits Issued

| Category of Store | Trafficking Rates (Redemptions) | Percent of All Stores | Percent of All Redemptions |
|---|---|---|---|
| Public supermarkets | 0.0% | 4.9 | 26.1 |
| Public large groceries | 0.0% | 0.1 | 0.1 |
| Public - other stores | 1.7% | 7.8 | 1.8 |
| **Publicly-Owned Stores** | **0.2%** | **12.8** | **28.0** |
| Private supermarkets | 2.6% | 10.4 | 50.3 |
| Private large groceries | 3.8% | 6.8 | 5.9 |
| **Large Private Stores** | **2.7%** | **17.2** | **56.2** |
| Private - other stores | 15.1% | 70.0 | 15.8 |
| All stores | 3.8% | 100.0 | 100.0 |

- *Only sixteen percent of redemptions are accounted for by the category most likely to traffic: small privately-owned stores and privately-owned stores that do not stock a full-line of food.*

**Stores in the poorest of poor neighborhoods are significantly more likely to engage in trafficking than stores located elsewhere** (Table 4). Few recipients are likely to sell food stamps for less than they

- *In neighborhoods where over 30 percent of the residents are in poverty, nearly one of every 5 stores investigated because they were suspected of trafficking and/or other violations of redemption regulations were found to engage in trafficking.*

- *In neighborhoods where 10 percent or less were below poverty, less than 1 of every 20 stores*

**Table 4 - Trafficking is More Frequent in the Poorest of Poor Neighborhoods.**

| Percent of Households in Poverty in Zip Code Where Store is Located: | Trafficking Violation Rates: | | Percent of All | |
|---|---|---|---|---|
| | Stores | Redemptions | Auth-orized Stores | Redemp-tions |
| 0 to 10% | 4.6% | 1.7% | 30.3 | 27.2 |
| 11 to 20% | 8.7% | 4.1% | 39.4 | 38.9 |
| 21 to 30% | 13.0% | 3.8% | 19.1 | 20.1 |
| over 30% | 19.2% | 7.6% | 11.2 | 13.8 |
| All Stores | 9.4% | 3.8% | 100.0 | 100.0 |

- *Eleven percent of the nation's authorized food retailers are located in high poverty/high trafficking areas, 70 percent are located in low poverty/low trafficking areas.*

Although urban areas are widely perceived as having more crime than rural areas, the relationship between trafficking and urbanicity is mild. Stores located in highly urban areas are slightly more likely to engage in trafficking than stores located elsewhere, but the percentage of dollars diverted from food benefits by trafficking is about the same in urban and rural areas.[8] This makes the relationship between a store's location in a high poverty area and its propensity to engage in trafficking all the more striking.

**Neighborhoods where stores with low trafficking rates are *most* likely to be located redeem the majority of food stamp benefits.**

- *Sixty-six percent of redemptions flow through stores located in neighborhoods where 20 percent or less of the population is below poverty.*

- *About fourteen percent of redemptions flow through stores located in neighborhoods where more than 30 percent of the population is below poverty.*

## TECHNICAL DISCUSSION

**When we look at additional considerations that bear on trafficking we find that factors which would tend to increase our estimate are matched by other factors that would tend to decrease it.** It is important to discuss each of these additional considerations explicitly.

Our procedure **underestimates** two aspects of the trafficking problem. First, among small retailers that are family owned or where ownership is closely-held, some violators do not redeem coupons for cash from the government (direct trafficking) but buy food stock for resale from large stores with trafficked coupons (a form of tax evasion we label "evasion trafficking"). Evasion trafficking is a grey area, since the practice does not necessarily involve discounting: a small firm makes an illicit profit at the least risk of detection if it accepts food stamps at full value for food from legitimate recipients, but uses them (illegally) to buy food at supermarkets for resale. In our estimate we are most concerned about evasion trafficking when it is linked to discounting (i.e., the firm buys food stamps at a discount and sells no food). We have no data to estimate the extent of evasion trafficking by unauthorized food stores or restaurants. However, evasion trafficking by authorized retailers ***is*** partially captured by our estimating procedure, when the trafficking involves discounting. The data we use to estimate direct trafficking adequately capture the rate at which ***all*** authorized stores engage in discounting. What the data fail to do is account for redemptions that are *unreported* by authorized discounting firms that buy food for resale with the coupons. If unreported redemptions could be measured, then the evasion trafficking factor would increase the national estimate of dollars diverted from food benefits by trafficking but would not change the store-based violation rates useful for targeting future action. Because only small stores are likely to find evasion trafficking cost-effective, the potential impact of this factor is limited to the small-store component of our estimate.

A second potential cause of underestimation stems from the fact that some violating stores will traffic with strangers while others restrict their illegal activities to people they know (which we label "network trafficking"). Investigators can and do catch this type of trafficking, but it requires a harder -- and sometimes impossible -- investigation. As a result, some network trafficking is included in our estimate (because our positive investigations include some cases where the network was penetrated and trafficking was caught). But other instances of network trafficking are not included in our estimate (because investigators were unable to penetrate the network and make the case). If investigators could catch all instances of network trafficking, the national estimate of trafficking diversions would increase.[9]

However, our procedure also **overestimates** other aspects of the trafficking problem. One source of overestimation is that we purposefully used very conservative figures to estimate the percentage of legitimate food sales by violating stores. The estimate of trafficking diversion would be

lower to the extent that legitimate food sales account for a larger portion of the redemptions in trafficking stores.

Another -- and major -- source of overestimation is that our estimating procedure relies on investigations targeted to find fraud: our estimate would decrease substantially if investigators had randomly selected average stores, rather than selected suspicious stores on purpose. Our sample includes investigations triggered in three primary ways. The first source, "leads," targets highly-suspicious stores (based on information from law enforcement agencies, informants, and so forth). The second source, requests for investigation (RFI) made by FCS field office staff, targets moderately-suspicious stores (based on citizen complaints or which field staff have reason to believe are violating redemption regulations). The third source of an investigation is a statistical violation-prone profile (VPP) which FCS developed in the late 1980s. For several reasons, the VPP targets the least suspicious stores.[10] Our sample of cases is too small to make separate national estimates of trafficking for investigations triggered by a lead, RFI or the VPP, but examining the raw (unweighted) investigation data is informative. When the genesis of the investigation was a lead, 21.2 percent of investigated stores were found to be trafficking. When the genesis was an RFI, 14.5 percent of investigated stores were found to be trafficking. When the genesis was the VPP, only 4.6 percent of investigated stores were found to be trafficking. Because almost a quarter of our data are leads-based and a third are from RFIs, we know our national estimate of trafficking is inflated. An estimate of the extent of trafficking based on investigations of randomly selected stores would more closely mirror the rate based on VPP-generated investigations and decrease our estimate of dollars diverted from food benefits by trafficking.

These four factors are likely to counterbalance each other. It is therefore a reasonable interpretation of our results to conclude that $815 million fairly represents the magnitude of the trafficking problem in 1993.

## ENDNOTES

[1]This paper examines trafficking by retailers, rather than by program recipients. There are no reliable national data on recipient trafficking. The Department has a project underway to see if it is possible to measure recipient trafficking reliably. Focus groups conducted to prepare for this study of recipient trafficking, however, indicate that *basing an estimate of trafficking on the number of recipients who traffic will greatly overstate the benefits trafficked for cash from the government*. The reason is that recipients who sell their stamps at a discount to raise cash, often buy stamps back later, also at a discount, to augment their food budgets. Many trafficking recipients eventually end up using stamps for food. That does not make this type of buying and swapping of stamps acceptable: it violates the intent of the program. It does, however, account for an important aspect of the trafficking phenomenon and indicates one of the reasons why our estimate of dollars diverted from food benefits by trafficking is

substantially lower than the number of recipients observers might find selling stamps.

[2]Trafficked coupons are not always redeemed for cash. Owners of small authorized or unauthorized stores, restaurants, and the like can pretend to be recipients and illegally use food stamps to buy food at supermarkets for resale in their stores. We label this "evasion trafficking" (since it is a form of tax evasion) and discuss its impact on our estimate at the end of this paper.

[3]Our estimates are based on the analysis data set for development of the new violation-prone profile from the Authorized Retailer Characteristics Study. The data consist of 11,412 investigations drawn from the FCS Store Investigation and Monitoring System database. The data consist of all investigations that were both (a) completed by March 1994 (when the data were drawn) and (b) started January 1, 1991 or later (as measured by date of first pass, if available; otherwise by date the case was assigned to an investigator). By selecting cases which started in 1991 or later we are assured that we are monitoring recent trafficking behavior, rather than past trends. In addition, by picking a start date two years after trafficking became a headquarters priority, we are assured that the emphasis filtered down to the field and we are analyzing cases in which finding trafficking was truly a priority of the investigators.

[4]Our analysis categorized stores on three dimensions (type of store, ownership, and amount of food stamp business). Store location was analyzed for the zip code in which each store was located on two dimensions (degree of urbanization, percent of households in poverty). Specific definitions employed are as follows:

Type of Store. Store types on the FCS application form were collapsed to the following seven categories (to ensure an adequate number of cases of each type):

| | |
|---|---|
| Supermarket | any store identifying itself to FCS as a supermarket or grocery with gross sales over $2,000,000. |
| Large grocery | any store identifying itself to FCS as a supermarket or grocery with gross sales between $500,000 and $2,000,000. |
| Small grocery | any store identifying itself to FCS as a supermarket or grocery with gross sales under $500,000. |
| Convenience | any store identifying itself to FCS by this title, regardless of gross sales. |
| Specialty | any store identifying itself to FCS by this title, regardless of gross sales. They are |

| | |
|---|---|
| | almost always single product line stores such as meat markets, fish markets, diary stores, etc. |
| Gas/Grocery | any store identifying itself to FCS by this title, regardless of gross sales. |
| Other Types | any store identifying itself to FCS by a title different than any of the preceding, regardless of gross sales. Examples include produce stands, general stores, combination grocery/bars, health/natural food stores, milk and/or bread routes. |

Ownership. Ownership types on the FCS application form were collapsed to the following two categories (to ensure an adequate number of cases of each type). "Franchise" is a separate category on the FCS application, not an ownership type: both public and private ownership categories include stores that report themselves as franchises.

| | |
|---|---|
| Public | any store identifying itself to FCS as a public corporation (i.e., a retailer whose stock trades publicly). |
| Private | any store identifying itself to FCS as other than publicly-owned. This includes private (i..e., closely-held) corporations as well as partnerships, sole proprietorships, co-ops, etc. |

Amount of Food Stamp Business. Stores were categorized into deciles on the basis of food stamp redemptions. The purpose was statistical, rather than analytical, to ensure that large disparities in redemptions by stores do not distort results.

Urbanization. Based on census data for the zip code in which the store is located. Four categories were employed: 0 to 10 percent urban population, 11 to 50 percent, 51 to 90 percent, and over 90 percent.

Poverty. Based on census data for the zip code in which the store is located. Four categories were employed: 0 to 10 percent of residential population below poverty, 11 to 20 percent, 21 to 30 percent, and over 30 percent.

[5]Statistically, the FCS investigation data base encompasses a sufficient number of cases to be used as a post-stratified sample of the national "population" of retailers. By categorizing the investigated stores on the five dimensions described in note 4 and weighting the stores, by category, to reflect the national population of retailers, by category, we are able to draw valid conclusions about the national situation.

[6]The specific calculation was a two-stage one. The first stage combines the data on the trafficking rates by type of store and store location with national redemption data to yield an estimate of the *gross* redemptions by trafficking authorized food stores. The second stage accounts for the fact that some of the gross redemptions are legitimate food sales. While we cannot know what percentage of a specific store's redemptions represent food sales rather than trafficking violations, expert opinion among investigators is that food sales are likely to be highest among "full-line" food stores (supermarkets and large grocery stores). We make the conservative assumption that legitimate food sales account for sixty percent of the gross redemptions among supermarkets and large groceries caught trafficking and treat forty percent of their gross redemptions as trafficked. Among all other types of food stores, the situation is less certain. A high proportion of these stores may be false "fronts" that exist solely to traffic. But even if half of these stores never sell any food, there will be some legitimate sales among the rest. We take the conservative approach of assuming that only ten percent of the gross redemptions are legitimate food sales among stores that do not stock a full line of food (i.e., small grocery, convenience, specialty food, gas/grocery, and "other" stores) and treat ninety percent of their gross redemptions as trafficked.

[7]We categorize stores according to how they categorized themselves in FCS authorization data. Examples of public corporations are major supermarket chains, like Albertson's and Safeway and gas and go mini-marts operated by companies like Texaco or Mobil. Many major supermarket chains, such as the Publix chain in Florida, are private corporations. IGA stores which have the appearance of a chain but are not public also fall under non-public ownership. Stores that most readers consider "franchises" may fall under either the public or non-public heading, depending on how they categorized themselves to FCS. Southland's 7-Eleven chain are classified under public corporations.

[8] The Bureau of the Census classifies zip codes by the urban/rural percentage of residents in the zip code. The trafficking rates by urban/rural percentage in the zip code in which the store is located are:

(continued on next page)

| Stores Located in Zip Codes Where Percent Urban is: | Trafficking Violation Rates: | |
|---|---|---|
| | Stores | Redemptions |
| 0 to 10% | 6.1% | 3.5% |
| 11 to 50% | 8.6% | 3.1% |
| 51 to 90% | 7.1% | 2.8% |
| 90 to 100% | 12.1% | 4.4% |

[9]An additional *potential* consideration is the quality of the investigation. Even when retailers are willing to traffic with strangers, investigators with greater experience and adequate time and resources to establish a case are likely to catch more trafficking than investigators with less experience, time and resources. We believe the overall quality of investigations in our sample is high for two reasons. First, FCS investigative procedures provide adequate time and resources to establish a case. Second, we have only used cases from 1991 and later, ensuring that investigators either had at least two years of experience in establishing trafficking cases or were hired with the understanding that trafficking cases were highest priority.

[10]Stores selected for investigation by the VPP are the least suspicious from a trafficking perspective for three reasons. First, the focus of the profile was to find stores selling ineligible items, rather than trafficking violations. Second, as with all statistical systems of this type, targeting efficiency deteriorates with age and starts to approach a random selection process (FCS is almost finished designing a new VPP to replace the original one). Third, the original VPP was used to "fill in" when an investigator went to an area based on a lead. While this is an appropriate adjustment in the light of resource constraints and alternative selection procedures, it constrains the statistical efficacy of the VPP selection.